

LINCOLN CITY/LANCASTER COUNTY PLANNING STAFF REPORT

for September 15, 2004 PLANNING COMMISSION MEETING

P.A.S.: Mustang Ridge Community Unit Plan
Co. Special Permit #04046, Preliminary Plat #04020

Note: This is a combined staff report for related items. This report contains a single background and analysis section for all items. However, there are separate conditions provided for each individual application.

PROPOSAL: A community unit plan and preliminary plat for four acreage residential units.

LOCATION: Southeast of the intersection of NW 27th and W. Agnew Road.

WAIVER REQUESTS:

1. Ornamental street lighting.
2. Sidewalks.
3. Street trees.
4. Landscape screens.
5. Stormwater Detention.
6. Block length.

LAND AREA: 78.44 acres, more or less.

CONCLUSION: This is an AG Community Unit Plan, proposing to “cluster” the allowed dwelling units to four acreage lots. Waivers requested are typical of a rural subdivision and are provided for in the code. A 20% bonus is being requested.

RECOMMENDATION:

Co. Special Permit #04046
Preliminary Plat # 04020

Conditional Approval
Conditional Approval

Waivers

- | | |
|-------------------------|----------|
| 1. Ornamental lighting | Approval |
| 2. Sidewalks | Approval |
| 3. Street trees | Approval |
| 4. Landscape screens | Approval |
| 5. Stormwater Detention | Approval |
| 6. Block length | Approval |

GENERAL INFORMATION

LEGAL DESCRIPTION: The remaining portion of the East ½ of the NW 1/4 of Section 16, T12N, R6E of the 6th P.M., Lancaster County, Nebraska.

EXISTING ZONING: AG Agriculture

EXISTING LAND USE: Farm land/pasture

SURROUNDING LAND USE AND ZONING: Agricultural land in AG zoning on all sides. Raymond Central School and one farm house to the north.

HISTORY: Changed from AA Rural and Public Use to AG Agriculture with the adoption of the 1979 Zoning Update.

COMPREHENSIVE PLAN SPECIFICATIONS: The 2025 Comprehensive Plan shows this area as Agriculture. This is outside the Lincoln growth tiers. A cluster is permitted by special permit in the AG district. In relation to clustering the Comprehensive Plan states:

Currently, acreage development has occurred under two development scenarios: AG - Agricultural District (minimum of 20 acres per lot) and AGR - Agricultural Residential District (minimum of 3 acres per lot) with the possibility in both AG and AGR zoning districts of clustering units together in order to preserve more open space and agricultural areas and/or receive additional density bonuses under a community unit development. The complex issue of acreage development and other public objectives requires a large array of land use strategies (pg F 70)

Acknowledge the "Right to Farm" and preserve areas for agricultural productions throughout the county by designating specific areas in advance for rural residential so as to limit areas of potential conflict between farms and acreages (pg F 70)

Retain the current overall density of 32 dwellings per square mile (20 acre) for all agriculturally zoned land. Provide for an ability to divide two 3 acre lots per "40" acre parcel with conditions and administrative review and right of appeal. This would allow more flexibility for parcel size while retaining the overall density and assist in retaining farmable units of land. (F 70)

In determining areas of higher density rural acreage (200 units or more per square mile), numerous factors will be reviewed, such as but not limited to water and rural water districts, soil conditions, roads, agricultural productivity, land parcelization, amount of existing acreages, and plans for urban or town development. Acreages should develop in areas that best reflect the carrying capacity of that area for acreages. A performance criteria should be developed to review requests for acreage zoning and to determine where these standards can best be met. (F 70)

Development of a performance standard "point system" will allow the location of higher density rural acreage development in either "AG" or "AGR" where the review criteria can be met. This allows equal treatment across

the county, maximum freedom of determination of marketing and sale, while locating those developments only in those areas where sufficient "points" can be accumulated to justify the development at the requested location." (F 71)

UTILITIES: This is not in a rural water district. Individual waste water treatment and well water is proposed. The groundwater report shows adequate quantity and quality.

TOPOGRAPHY: The property is rolling, draining to the south.

TRAFFIC ANALYSIS: W. Agnew Road is a paved county road.

PUBLIC SERVICE: This area is served by Raymond Rural Fire District. This is in the Raymond School District. This is in the Norris Public Power service area.

REGIONAL ISSUES: Expansion of the acreage areas. Clustering to preserve farm land.

ENVIRONMENTAL CONCERNS: The Historic and Ecological Resources survey shows an area of native hay to the south of this property. The soil rating is 5.17, on a scale of 1 to 10 where 1-4 are prime ag land. This is not prime land.

AESTHETIC CONSIDERATIONS: na

ALTERNATIVE USES: All uses allowed in the AG district. Three 20+ acre lots.

ANALYSIS:

1. This request is for a Special Permit for a Community Unit Plan for 4 acreage residential lots. A crushed rock private street is proposed and individual sewer and water is proposed. A 20% dwelling unit bonus is being requested for preservation of the farm land. Typical acreage lots are three acres. Additional farm land could be preserved by proposing three acre lots rather than the five acre lots proposed.
2. This request is in general conformance with the Comprehensive Plan.
3. The arrangement of the lots appears to reflect the topography and drainage of the parcel.
4. The Planning Department issued a draft Performance Standard and Acreage Development Strategy on September 17th 2003. Under that proposal, a raw score of 300 could lead to support for a requested change of zone to AGR. Other bonuses could be available based on the score. The raw score for this parcel is -29,
5. The density calculations for the project are as follows;

78.44 acres at 1 dwelling per 20 acres	=	3.92 dwellings
20% bonus requested X 1.20	=	4.70 dwellings
		4 dwellings permitted
Requested		4 units on 4 lots

6. There were no conflicting farm uses, such as feedlots, noted in the immediate area.
7. This reflects the normal adjustments to accomplish a cluster style of subdivision through the CUP, however, the lot size is larger than typical. The owner indicates that the larger lots are proposed to allow more animals on the lots.
8. Waivers are requested for street lights, sidewalks, block length, street trees, storm drainage and screening. These are typical waivers required, provided for and appropriate for agriculture/acreage clusters. Yards are adjusted from AG to AGR standards as part of the cluster.
9. The County Engineer's memo of August 20 notes several minor issues and corrections.
10. The Lincoln/Lancaster County Health Department notes the water and waste water treatment are adequately addressed. An improperly constructed well on Lot 1, Block 2 is noted to be decommissioned.
11. Norris Public Power notes easements in place.
12. Building and Safety note the north-south numbered street should be NW 22nd Street vs NW 23rd Street.

CONDITIONS FOR SPECIAL PERMIT #04046:

Site Specific:

1. After the applicant completes the following instructions and submits the documents and plans to the Planning Department office and the plans are found to be acceptable, the application will be scheduled on the County Board's agenda: (NOTE: These documents and plans are required by resolution/ordinance or design standards.)
 - 1.1 Make the corrections requested by the County Engineer in his letter of August 20, 2004.

1) Developer shall be responsible for installing the street identification sign: One "stop" sign and one "no outlet" sign.

2) Developer shall install 22' Type III Barricades at the temporary dead-ends, and grading shall extend around the temporary turnaround.

3) General Note #16, Add, "and Lancaster County will not accept maintenance of the streets, due to not meeting the six lot minimum".

4) All culverts shall have a concrete headwall or flared-end section on the inlet end.

1.2 Revise the drawing to show NW 23 as NW 22 Street.

1.3 Show access to the farmland/outlot.

2. This approval permits 4 single family lots.

General:

3. Before receiving building permits:

3.1 The permittee is to submit a revised site plan and the plan is found to be acceptable.

3.2 The permittee is to submit six prints and a permanent reproducible final site plan as approved by the County Board.

3.3 The construction plans are to comply with the approved plans.

3.4 The final plat(s) is/are approved by the County Board.

3.5 The County Board approves associated requests:

3.5.1 Mustang Ridge Preliminary Plat #04020.

3.5.2 A waiver to the sidewalk, street lights, landscape screen, stormwater detention and street tree requirements since the area is of larger lots, a rural nature and the subdivision will not be annexed.

3.5.3 A modification to lot area, frontage and setbacks as part of the CUP.

3.5.4 A modification to the requirements of the land subdivision resolution to permit a block length in excess of 1320' along the north, south, east and west perimeter of this subdivision and the east side of NW 22nd Street.

3.6 The County Engineer has approved:

3.6.1 An agreement for street maintenance.

STANDARD CONDITIONS:

4. The following conditions are applicable to all requests:

- 4.1 Before occupying this Community Unit Plan all development and construction is to comply with the approved plans.
- 4.2 Before occupying this Community Unit Plan, City/County Health Department is to approve the water and waste water systems.
- 4.3 All privately-owned improvements are to be permanently maintained by the owner or an appropriately established homeowners association approved by the County Attorney.
- 4.4 The site plan accompanying this permit shall be the basis for all interpretations of setbacks, yards, locations of buildings, location of parking and circulation elements, and similar matters.
- 4.5 This resolution's terms, conditions, and requirements bind and obligate the permittee, its successors and assigns.
- 4.6 The County Clerk is to file a copy of the resolution approving the permit and the letter of acceptance with the Register of Deeds. The Permittee is to pay the recording fee.

CONDITIONS FOR PRELIMINARY PLAT #04020:

Site Specific:

- 1. After the subdivider completes the following instructions and submits the documents and plans to the Planning Department office, the preliminary plat will be scheduled on the City Council/County Board agenda: (NOTE: These documents and plans are required by ordinance or design standards.)

- 1.1 Make the corrections requested by the County Engineer in his letter of August 20, 2004.
 - 1) Developer shall be responsible for installing the street identification sign: One "stop" sign and one "no outlet" sign.
 - 2) Developer shall install 22' Type III Barricades at the temporary dead-ends, and grading shall extend around the temporary turnaround.
 - 3) General Note #16, Add, "and Lancaster County will not accept maintenance of the streets, due to not meeting the six lot minimum".
 - 4) All culverts shall have a concrete headwall or flared-end section on the inlet end.
- 1.2 Revise the drawing to show NW 23 as NW 22 Street.
- 1.3 Show access to the farmland/outlot.
2. The County Board approves associated requests:
 - 2.1 County Special Permit # 04046 for the Community Unit Plan.
 - 2.2 A waiver to the storm water detention, sidewalk, street paving, street lights, landscape screen, and street tree requirements since the area is of larger lots, a rural nature and the subdivision will not be annexed.
 - 2.3 A waiver to the lot area, setbacks and frontage.
 - 2.4 A modification to the requirements of the land subdivision ordinance to permit a block length in excess of 1320' along the north, south, east and west perimeter of this subdivision and the east side of NW 22nd Street..

General:

3. Final Plats will be scheduled on the Planning Commission agenda after:
 - 3.1 Streets, water facilities if rural water, drainage facilities, temporary turnarounds and barricades, and street name signs have been completed.
 - 3.2 The subdivider has signed an agreement that binds the subdivider, its successors and assigns:

- 3.2.1 To submit to the County Engineer an erosion control plan.
- 3.2.2 To protect the remaining trees on the site during construction and development.
- 3.2.3 To submit to lot buyers and home builders a copy of the soil analysis
- 3.2.4 To complete the private improvements shown on the preliminary plat.
- 3.2.5 To maintain the outlots and private improvements on a permanent and continuous basis. However, the subdivider may be relieved and discharged of this maintenance obligation upon creating in writing a permanent and continuous association of property owners who would be responsible for said permanent and continuous maintenance. The subdivider shall not be relieved of such maintenance obligation until the document or documents creating said property owners association have been reviewed and approved by the County Attorney and filed of record with the Register of Deeds.
- 3.2.6 To relinquish the right of direct vehicular access to W. Agnew Road except for NW 22nd Street.
- 3.2.7 To comply with the provisions of the Land Subdivision Resolution regarding land preparation.

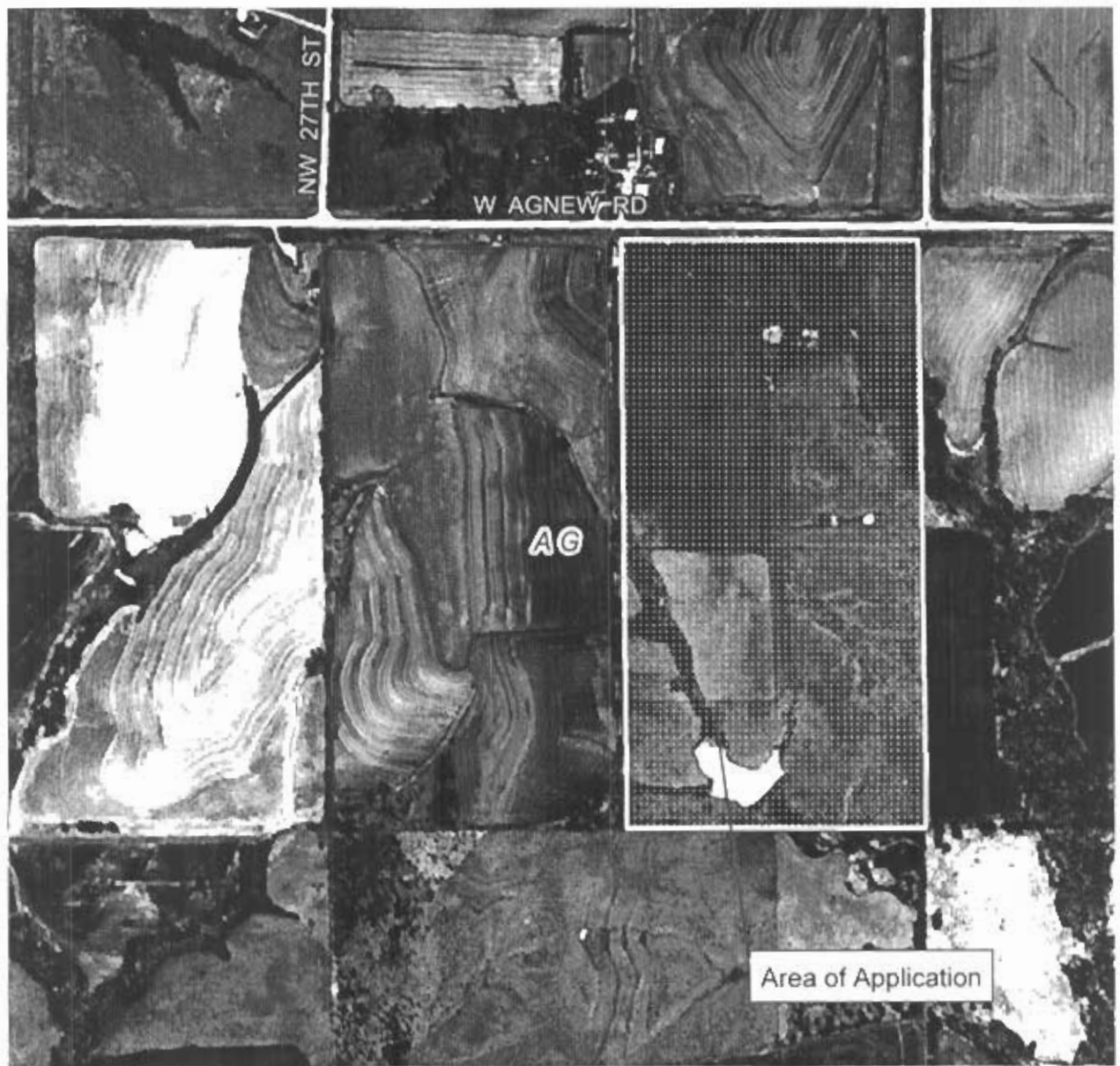
Prepared by:

Mike DeKalb, 441-6370, mdekalb@lincoln.ne.gov
Planner
August 31, 2004

APPLICANT: Brian D. Carstens
Carstens and Associates
601 Old Cheney Road, Suite C
Lincoln, NE 68512
434 - 2424

OWNER: Robert L. Benes and Michelle S. Benes, husband and wife
1640 Normandy Court, Suite "A"
Lincoln, NE 68512
423 - 6811

CONTACT: Brian D. Carstens
Carstens and Associates
601 Old Cheney Road, Suite C
Lincoln, NE 68512
434 - 2424



Preliminary Plat #04020
Special Permit # 04046
Mustang Ridge
NW 27th & Agnew Rd.
Zoning:

2002 aerial

- R-1 to R-8 Residential District
- AG Agricultural District
- AGR Agricultural Residential District
- R-C Residential Conservation District
- O-1 Office District
- O-2 Suburban Office District
- O-3 Office Park District
- R-T Residential Transition District
- B-1 Local Business District
- B-2 Planned Neighborhood Business District
- B-3 Commercial District
- B-4 Lincoln Center Business District
- B-5 Planned Regional Business District
- H-1 Interstate Commercial District
- H-2 Highway Business District
- H-3 Highway Commercial District
- H-4 General Commercial District
- I-1 Industrial District
- I-2 Industrial Park District
- I-3 Employment Center District
- P Public Use District

One Square Mile
 Sec. 16 T12N R6E



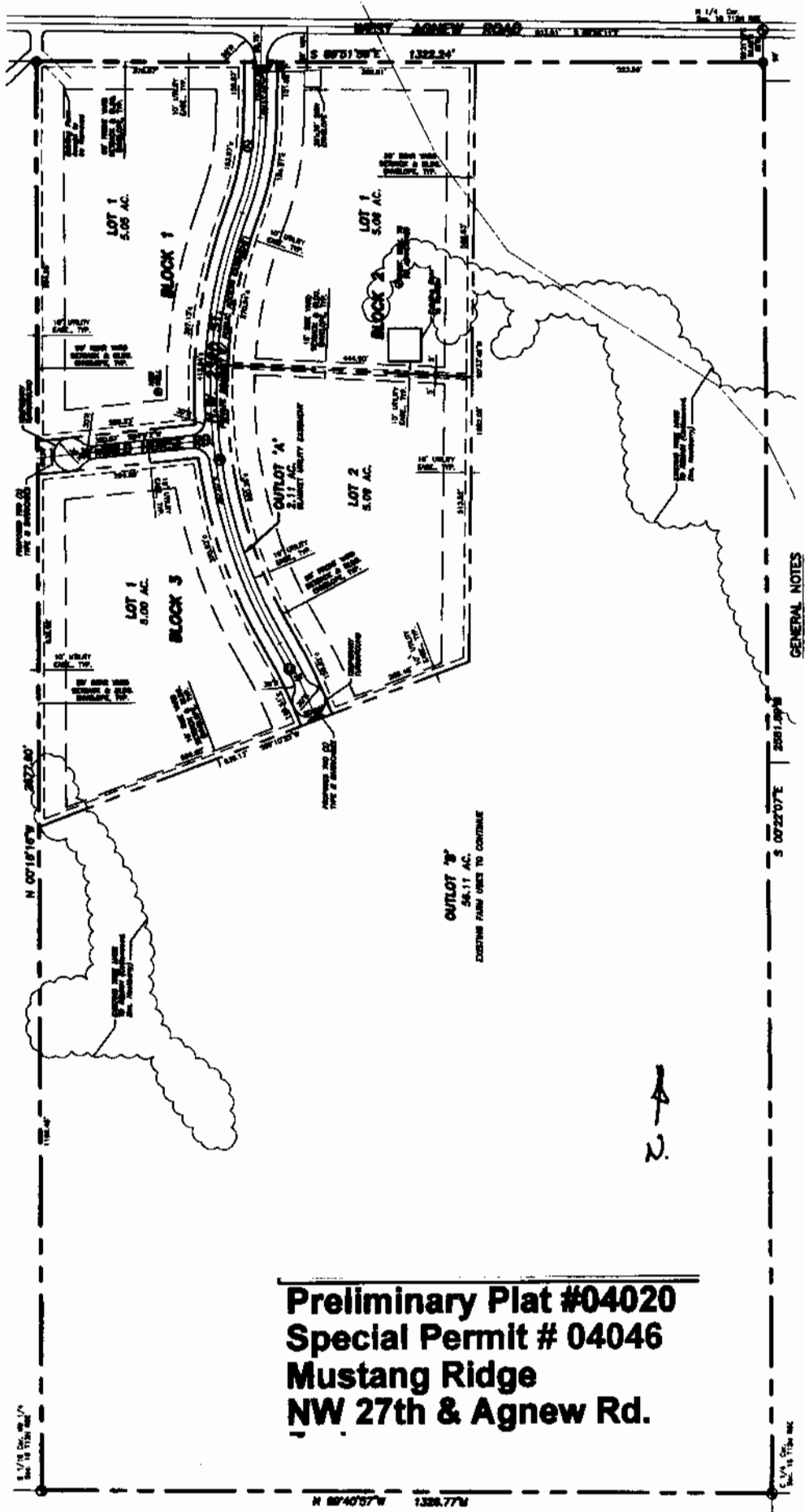
Zoning Jurisdiction Lines

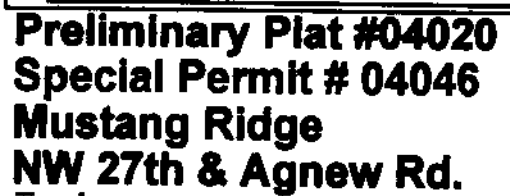
City Limit Jurisdiction



Rock Creek Rd.

Lincoln City - Lancaster County Planning De





GENERAL NOTES

1. THIS PRELIMINARY PLAT/ C.U.P. CONTAINS 78.44 ACRES MORE OR LESS.
2. THIS PRELIMINARY PLAT/C.U.P. PERMITS 4 SINGLE FAMILY LOTS AND 2 OUTLOTS. EACH LOT SHALL CONTAIN A MAXIMUM OF ONE SINGLE FAMILY RESIDENCE AND OUT BUILDINGS, ALL LOCATED WITHIN THE BUILDING ENVELOPES AS SHOWN AND/ OR NOTED.
3. THE CURRENT ZONING IS 'AG' & THE PROPOSED ZONING IS 'AG' WITH C.U.P.
4. THE MAXIMUM BUILDING HEIGHT SHALL NOT EXCEED 35 FEET, AS PER 'AG' ZONING.
5. THE DEVELOPER/OR OWNER RESERVES THE RIGHT TO BUILD ANYWHERE WITHIN THE BUILDING ENVELOPES SHOWN.
6. THE DEVELOPER PROPOSES THE USE OF INDIVIDUAL WATER WELLS FOR POTABLE WATER SUPPLY.
7. THE DEVELOPER PROPOSES THE USE OF INDIVIDUAL WASTE WATER SYSTEMS. IF PERCOLATION TEST DO NOT PERMIT SUB SURFACE FIELDS, LAGOONS SHALL BE INSTALLED. WASTE WATER SYSTEMS SHALL BE APPROVED BY THE LANCASTER COUNTY HEALTH DEPARTMENT.
8. THE DEVELOPER SHALL CONSTRUCT AND SURFACE THE PRIVATE ROADWAY WITH 3" OF CRUSHED ROCK AND 1" OF GRAVEL IN ACCORDANCE WITH THE LANCASTER COUNTY STANDARDS. THE COUNTY SHALL BE NOTIFIED PRIOR TO THE LAYING OF THE GRAVEL. ALL SURFACING RADII AT ALL INTERIOR INTERSECTIONS SHALL BE 30 FEET. THE INTERSECTION AT WEST AGNEW ROAD AND N.W. 23RD STREET SHALL HAVE A RADIUS OF 50.0 FEET.
9. ONLY ONE SUBDIVISION GROUND SIGN SHALL BE PERMITTED FOR THIS DEVELOPMENT.
10. ALL CURVILINEAR DIMENSIONS ARE CHORD LENGTHS.
11. DIRECT VEHICULAR ACCESS TO WEST AGNEW ROAD IS HEREBY RELINQUISHED EXCEPT FOR N.W. 23RD STREET.
12. ALL TOPOGRAPHIC CONTOURS ARE AT NAVD 88 DATUM.
13. EACH LOT SHALL HAVE ONLY ONE RESIDENTIAL ACCESS.
14. THE FOLLOWING WAIVERS ARE APPROVED WITH THIS PRELIMINARY PLAT #_____: SIDEWALKS, STREET TREES, STREET LIGHTING, LANDSCAPE SCREENING AND BLOCK LENGTH.
15. 'JUNK CARS' SHALL BE PROHIBITED IN THIS DEVELOPMENT AS NOTED IN PROTECTIVE COVENANTS.
16. FUTURE LOT OWNERS WILL BE ADVISED THAT THIS IS IN A RURAL FARM AREA AND THAT NORMAL AND CUSTOMARY FARM ACTIVITIES ARE NOT A NUISANCE.
17. FARM ACCESSES ARE FOR AGRICULTURAL USES ONLY. ANY OTHER USE WILL FORFEIT AND RELINQUISH THAT ACCESS.

**Preliminary Plat #04020
Special Permit # 04046
Mustang Ridge
NW 27th & Agnew Rd.**

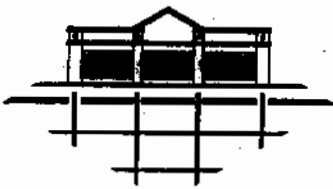
MUSTANG RIDGE

LEGAL DESCRIPTION OF C.U.P./ PRELIMINARY PLAT:

A legal description of the remaining portion of the East one half of the northwest Quarter of Section 16 Township 12 North Range 6 East of the Sixth Principal Meridian, Lancaster County, Nebraska. More particularly described by metes and bounds as follows:

Commencing at the North one quarter corner of Section 16 Township 12 North Range 6 East of the Sixth Principal Meridian; Thence South 00°31'10" East, (an assumed bearing), a distance of 59.90 feet to the POINT OF BEGINNING; Thence South 00°22'07" East, on the East line of the Northwest Quarter, a distance of 2581.89 feet; Thence North 89°40'57" West, on the South line of the Northwest Quarter, a distance of 1326.77 feet, to the South 1/16 corner of the Northwest Quarter; Thence North 00°16'16" West, on the West line of the East one half of the Northwest Quarter, a distance of 2577.60 feet; Thence South 89°51'59" East, a distance of 1322.24 feet to the POINT OF BEGINNING, and containing a calculated area of 3,416,861.75 square feet or 78.440 acres more or less.

**Preliminary Plat #04020
Special Permit # 04046
Mustang Ridge
NW 27th & Agnew Rd.**



BRIAN D. CARSTENS AND ASSOCIATES

LAND USE PLANNING RESIDENTIAL & COMMERCIAL DESIGN

601 Old Cheney Road, Suite C Lincoln, NE 68512 Phone: 402.434.2424

August 13, 2004

Mr. Marvin Krout
Director of Planning
Lincoln City- Lancaster County Planning Department
555 South 10th Street
Lincoln, NE 68508

RE: MUSTANG RIDGE - PRELIMINARY PLAT & COMMUNITY UNIT PLAN
N.W. 27th Street & West Agnew Road

Dear Mr. Krout,

On behalf of Aspen Builders and Robert L. & Michelle S. Benes, we submit the above mentioned applications for your review. Mustang Ridge is a proposed AG/C.U.P. on approximately 78.44 acres. We are showing 4 single family acreage lots, containing a minimum of 5 acres. They will each have private wells and individual septic systems. The private roadway will be constructed to meet Lancaster County design standards.

We have 'clustered' the 4 lots close to West Agnew Road so the that balance of the farm can continue to be farmed. N.W. 23rd Street has been shown to access the proposed lots and connecting to West Agnew Road. We have shown a private roadway towards the west of N.W. 23rd St. to allow for any potential future subdivision.

We are requesting waivers to the Land Subdivision Ordinance to waive sidewalks, street trees, street lighting, landscape screening and block length, as each lot is larger than 1 acre and this project will not be annexed into the City of Lincoln at this time.

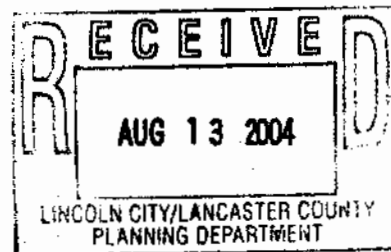
Please contact me if you have any further questions.

Sincerely,

Brian D. Carstens

cc: Aspen Builders

Enclosures: 24 Copies of Sheets 1 of 3
8 Copies of Sheets 2 & 3 of 3
County Application for a Preliminary Plat
County Application for a Special Permit
Application Fee of \$800.00
Certificate of Ownership
2 Copies of Groundwater Report
3 Copies of the Preliminary Soils Analysis
2 Copies of Culvert Analysis
8-1/2" x 11" Reduction



Lancaster

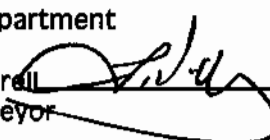
DON R. THOMAS - COUNTY ENGINEER

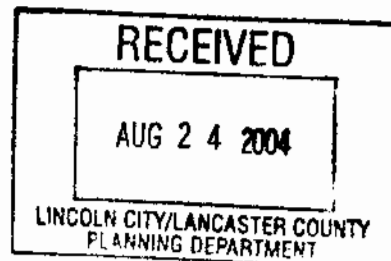
County

Engineering

Department

DEPUTY- LARRY V. WORRELL
COUNTY SURVEYOR

DATE: August 20, 2004
TO: Mike DeKalb
Planning Department
FROM: Larry V. Worrell 
County Surveyor
SUBJECT: MUSTANG RIDGE PRELIMINARY PLAT



Upon review, this office would have the following comments:

- 1) *General Notes* are acceptable
- 2) Developer shall be responsible for installing the street identification signs:
One "stop" sign and one "no outlet" sign
- 3) Developer shall install 22' Type III Barricades at the temporary dead-ends, and
grading shall extend around the temporary turnaround
- 4) #16 ADD "and Lancaster County will not accept maintenance of the streets, due
to not meeting the six lot minimum"
- 5) All culverts shall have a concrete headwall or flared-end section on the inlet end

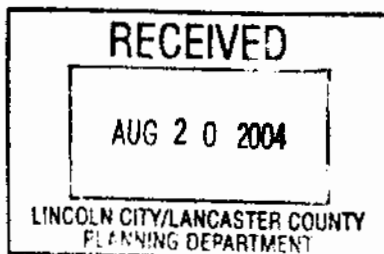
LWV/cm

SUBDIV.WK/Mustang Ridge Prelim Plat.Mem



AREA 2
SERVICE CENTER

R.R. 1 BOX 56
ROCA, NEBRASKA 68430
402/423-3855
FAX 402/423-8090



August 18, 2004

Mike Dekalb, Project Planner
555 S. 10th St. #213
Lincoln, NE 68508

RE: Mustang Ridge

Dear Mike,

I have reviewed the subject plat and see easements in place as expected.

As always, thanks for your cooperation.

Sincerely,

Rick Volmer, Construction Superintendent Area 2

**LINCOLN-LANCASTER COUNTY HEALTH DEPARTMENT
INTER-OFFICE COMMUNICATION**

TO: Mike DeKalb

DATE: August 24, 2004

DEPARTMENT: Planning

FROM: Chris Schroeder

ATTENTION:

DEPARTMENT: Health

CARBONS TO: EH File
EH Administration

SUBJECT: Mustang Ridge
PP #04020 SP #04045

The Lincoln-Lancaster County Health Department (LLCHD) has reviewed the proposed development with the following noted:

- The developer proposes the use of private wells for potable water. A report addressing expected water quantity and water quality must be provided to the LLCHD.
- The developer has adequately addressed wastewater treatment issues in the general notes of the site plan.
- An improperly constructed well exists on Block 2, Lot 1. The site plan indicates this well will be decommissioned. The well must be decommissioned by a licensed well driller.
- During the construction process, the land owner(s) will be responsible for controlling off-site dust emissions in accordance with Lincoln-Lancaster County Air Pollution Regulations and Standards Article 2 Section 32. Dust control measures shall include, but not limited to application of water to roads, driveways, parking lots on site, site frontage and any adjacent business or residential frontage. Planting and maintenance of ground cover will also be incorporated as necessary.

**LINCOLN-LANCASTER COUNTY HEALTH DEPARTMENT
INTER-OFFICE COMMUNICATION**

TO: Mike DeKalb

DATE: August 30, 2004

DEPARTMENT: Planning

FROM: Chris Schroeder

ATTENTION:

DEPARTMENT: Health

CARBONS TO: EH File
EH Administration

SUBJECT: Mustang Ridge
PP #04020 SP #04045
Water Report

The water report prepared for Mustang Ridge indicates the potential for developing individual domestic wells with adequate quantity of potable water appears to be good. The report suggests that test wells be drilled before home construction because the water availability can change significantly from location to location. The homeowner will likely choose to install treatment devices for water softening purposes.

GROUNDWATER REPORT

MUSTANG RIDGE

**E1/2 NW1/4 Sec. 16 - T. 12N. - R. 6E.
NW 23rd STREET AND WEST AGNEW ROAD**

LANCASTER COUNTY

Petitioner: Brian D. Carstens

Brian D. Carstens & Associates

Developer: Aspen Builders, Inc.

Robert Benes

Hydrogeologist and Prepare of Report:

Vincent H. Dreeszen

Report of Groundwater Investigation

MUSTANG RIDGE

E1/2 NW1/4 Sec. 16-12N-6E

Lancaster County

Mustang Ridge is a proposed development in northwest Lancaster County at NW 23rd Street and West Agnew Road. Four lots of approximately 5 acres each are planned on about 23 acres in the E1/2 NW1/4 Sec. 16-2N-6E. The remainder of the 80 acre tract is in Outlot A of 2.1 acres and Outlot B, 56.1 acres (Figures 1 and 2). The development is one-half mile south of Raymond Central School.

The area is in the highly dissected glaciated region of eastern Nebraska. Glacial till, silts and fine sand overlie the bedrock of the Dakota Sandstone Formation. Sandstones of the Dakota constitute the principal aquifer. However, a few small capacity wells in the general area have been developed in silts or fine sands underlying the glacial till and overlying the Dakota. Usually wells in this upper aquifer yield only a few gallons per minute, although water quality is of reasonably good quality. Water in the Dakota is usually more mineralized and is known to be quite saline in some deep sandstone wells in northern Lancaster County.

Several test wells were drilled 1959 to 1961 to locate a water supply for a U.S. Corps of Engineers NIKE Site, SE1/4

Sec. 4-12N-6E about one and one-half miles north of Mustang Ridge. The thickness of sandstone ranged from as much as 8 to 16 feet to no upper sandstone at a location about one-fourth mile south of the site. One well developed at the site was reported to yield 35 gallons per minute (gpm). Later, wells were developed in sand and gravel to the north in Saunders County.

Several tests were drilled and wells developed at Raymond Central School, Center Sec. 9-12N-6E., one-half mile north of Mustang Ridge. Sandstone thickness ranged from one foot to 25 feet in tests a few hundred feet apart. One well, Registration Number G-81390 near the center of the section was reported to yield 25 gpm from sandstone between the depths of 200 to 225 feet.

Several other sandstone wells to the east and northeast of Mustang Ridge have been developed with the deepest well in the NW1/4 NE1/4 Sec. 10-9N-6E drilled to 270 feet and a bottom hole mean sea level depth of about 1090 or about 100 feet deeper than wells at Raymond Central School. This would compare to a bottom hole depth of about 1176 feet in the recently completed well, Lot 1, Block 1 at Mustang Ridge. Water quality in sandstone in the deeper lying sandstone is not known.

Two wells have been drilled at Mustang Ridge. The depth of an old livestock well, Lot 1, Block 2 is not known but was reported to be about 160 to 165 feet by the original land owner. The elevation of that well, about 1345 feet above MSL, suggests

the well may be in the same sandstone as the new well developed in Lot 1, Block 1, (msl elevation of about 1380 feet and total depth of 204 feet). The new well was completed in sandstone from 197 to 204 feet and was estimated to be capable of yielding 15 gpm (copy of log is attached). This well has a static water level of 98 feet and a saturated thickness of 106 feet (well locations shown in Figure 1).

The information from the two wells is consistent with the reported information supplied by the home owner immediately north of the proposed subdivision. No log of the well is available but the well is reported to be 160 to 165 feet deep (land surface elevation of 1350 to 1360 feet). The owner reports the well was test pumped when drilled at more than 25 gpm.

Water quality analyses are available from the two wells at Mustang Ridge (copies attached). The water quality is similar in the two wells and to this investigator surprisingly fresh. Two separate samples for the new well were submitted to the laboratory. Total dissolved solids are about 430 ppm, hardness was about 180 ppm and the bicarbonate level was about 385 ppm. Sulfate was 35 ppm and Calcium was 55 ppm. Sodium and chloride levels were exceptionally low for Dakota sandstone water, about 75 and 20 ppm respectively. Iron at 0.10 ppm and Manganese at 0.20 ppm are relatively low. Nitrate as N was 0.20 ppm. The relative freshness of the water in the Dakota for this part of Lancaster County suggests high rates of recharge to the aquifer.

The potential for developing individual domestic wells with an adequate quantity of potable water appears to be very good. Because the water is hard most home owners would opt to use water softeners for household purposes.

Because the thickness and occurrence of sandstones in the upper Dakota is known to change significantly in short distances, a test hole should be drilled before home construction is started. In the highly unlikely event adequate water cannot be found at depths similar to that in the newly constructed well, it is possible that treatable water could be found at somewhat greater depths.

The existing old stock well should be reconstructed to meet existing standards or properly abandoned.

The remaining portion of the East one half of the northwest Quarter of Section 16 Township 12 North Range 6 East of the Sixth Principal Meridian, Lancaster County, Nebraska.

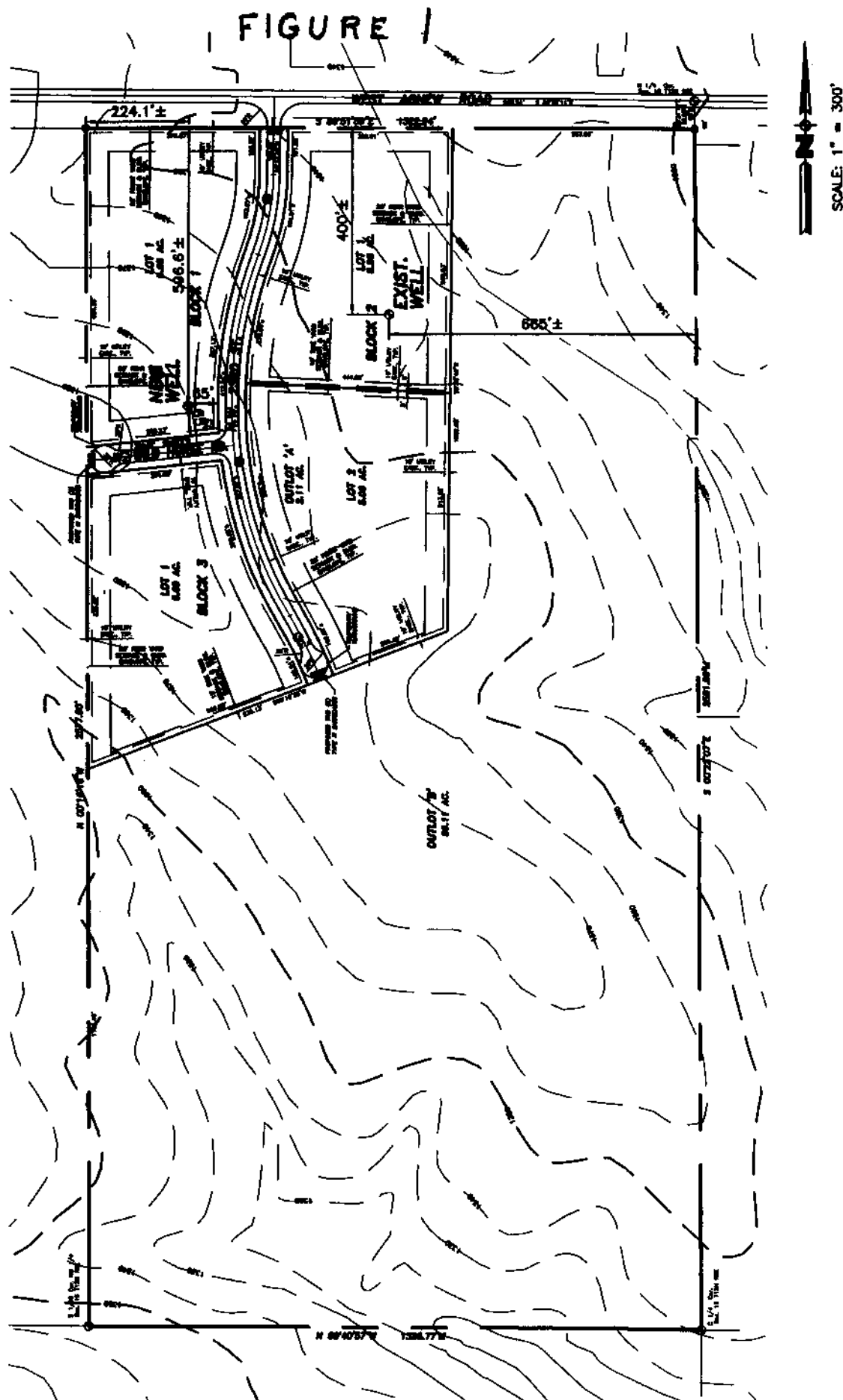


FIGURE 2



WATER WELL DATA SHEET

LOCATION: N 49° 0.0' 53.5" W 76 45' 9.0" DATE: 6/23/04 COUNTY: LANCASTER

OWNER: ABI Mustang Ridge

DRILLER: HOLLY WELL

STATIC WATER LEVEL: 98 FT. ELEVATION: 1380

DEPTH - 204 FT.
YIELD ~ 15 GPM

Lot Block 1

0-1 TOPSOIL
1-19 CLAY, BROWN
19-68 SAND, BROWN, FINE
68-104 CLAY, TAN, SILTY
104-118 CLAY, BLUE
118-127 CLAY, GRAY & YELLOW
127-128 IRONSTONE
128-150 SHALE, YELLOW & GRAY
150-197 SHALE, GRAY & BLUE
197-204 SANDSTONE, MEDIUM
204-213 SHALE, GRAY
213-214 SHALE, RED

T. 12 N., R. 6 E., Sec. 16 b

**Nebraska Health and Human Services
Regulation and Licensure - Laboratory Services**

3701 South 14th Street
Lincoln, NE 68502
(402) 471-2122
(402) 471-2080 (fax)

**ASPENBLDRS
ASPEN BUILDERS, INC**

**MUSTANG RIDGE
Stock Well
Lot 1, Block 2**

**1640 NORMANDY COURT
LINCOLN, NE 68516**

Laboratory Report Printed on: MAY-29-04

Laboratory Analysis For: PRIVATE 13 PARAMETER

Sample Comments:

Page: 1 of 1

Laboratory Number: **P25220-45**

Date Collected: **12-Apr-2004 11:15 AM**

Sampled By: **DEAN GRAHAM**

Date Received: **12-Apr-2004**

Location: **NW 12 ST&AGNEW RD**

Parameters	Test Results	Qualifier	Report Level	Units	Method	Prep Date	Analysis Date	Analyst
Alkalinity, Total	229.		20	mg/l	2320B		04/14/04	SH
CALCIUM	118.		.15	mg/l	215.1		05/04/04	SS
Chloride	104.		1	mg/L	4500CL-E		04/22/04	sr
Nitrate+Nitrite (As N)	43.		.05	mg/l	353.2		04/13/04	km
Fluoride	1.1		.2	mg/l	4500F-C		04/13/04	jn
IRON	1320.		50	ug/l	SM3111B		05/04/04	SS
Hardness, Total	200.		4	mg/l	2340C		04/14/04	SH
MANGANESE	243.		1	ug/l	200.8		04/14/04	CC
SODIUM	60.8		10	mg/l	SM3111B		05/04/04	SS
pH	7.47			pH	150.1		04/13/04	SH
SULFATE	42.		10	mg/l	EPA 375.4		04/27/04	HK
TOTAL COLIFORM	99.0		0	cfu/100ml	9223B-QT		04/13/04	HK
E. COLI	0.0		0	cfu/100ml	9223B-QT		04/13/04	HK
Solids, Total Dissolved (Tds)	354.		10	mg/l	160.1		04/18/04	SH

Report Remarks:

LOT 472HYB

See reverse side of report for description of acronyms and data qualifiers
For inquiries on result interpretation call: (402) 471-2541.

Submitted For

ASPEN BUILDERS INC
W AGNEW RD & NW
LINCOLN, NE 68516

SAMPLE MARKED

#2

LABORATORY NUMBER

04702649

Submitted By

Aspen Builders, Inc
6120 Village Drive, Ste. B
Lincoln, NE 68516

MUSTANG RIDGE
Domestic Well
Lot 1, Block 1

DATE RECEIVED

09-Jul-2004

DATE REPORTED

12-Jul-2004

ANALYSIS OF CHEMICAL PROPERTIES			UNIT OF MEASURE	RESULT	LBS/ ACRE FOOT	SATISFACTORY	POSSIBLE PROBLEM	POSSIBLE PROBLEM
(For Overhead Sprinkler Only)	pH	---	---	8.2	---			
	Hardness	---	---	176.7	---			
	Bicarbonate	ppm	---	345.3	939.4			
	Carbonate	ppm	---	2.0	5.4			
ELECTRICAL CONDUCTIVITY	Electrical Conductivity (ECw)	mmhos/cm	---	0.67	---			
	Total Soluble Salts	ppm	---	429	1166			
SODIUM CHLORIDE	Sodium	meq/l	---	3.52	---			
	Chloride	ppm	---	19	51			
	Boron	ppm	---	0.10	0.30			
SODIUM CHLORIDE	Sodium	ppm	---	81.0	220.0			
	Chloride	ppm	---	19	51			
SODIUM ABSORPTION RATIO	Sodium Absorption Ratio Adj.	meq/l	---	5.61	---			
	Electrical Conductivity (ECw)	mmhos/cm	---	0.67	---			
	Total Soluble Salts	ppm	---	429	1166			
To maintain good soil structure in arid regions, irrigation water should have the capacity to replace the soluble salts being dissolved. If the salts being dissolved are not replaced, a decrease in permeability may occur.						No anticipated difficulty with most crops.	Some difficulty for sensitive & moderately sensitive crops	Significant difficulty for most crops

ANALYSIS OF NUTRIENTS						
PLANT NUTRIENTS AS NORMALLY REPORTED IN WATER ANALYSIS	RESULTS AS PPM	NUTRIENTS CONVERTED TO BASIC FERTILIZER MATERIAL FORMS	RESULTS LB/ACRE FOOT	MEQ/LITER		
NITRATE (NO ₃ -N)	0.18	NITROGEN (N)	0.50	CATIONS	K+	0.20
PHOSPHATE (PO ₄)	1.00	PHOSPHATE (P ₂ O ₅)	2.03		NA+	3.52
POTASSIUM (K)	8.00	POTASH (K ₂ O)	25.90		CA++	2.69
MAGNESIUM (Mg)	10.0	MAGNESIUM OXIDE (MgO)	45.0	ANIONS	MG++	0.82
CALCIUM (Ca)	54.0	CALCIUM (Ca)	146.9		CL-	0.52
SULFATE (SO ₄)	34.0	SULFUR (S)	30.6		SO4--	0.71
MANGANESE (Mn)	0.20	MANGANESE (Mn)	0.54		HCO3-	5.66
IRON (Fe)	0.20	IRON (Fe)	0.54		CO3--	0.07
BORON (B)	0.10	BORON (B)	0.30		PO4---	0.01
					NO3-	0.01

pHc 7.29
TOTAL CATIONS 7.24
TOTAL ANIONS 6.98
SAR 2.66

Submitted For

ASPEN BUILDERS INC
W AGNEW RD & NW
LINCOLN, NE 68516

MUSTANG RIDGE
Domestic Well
Lot 1, Block 1

SAMPLE MARKED

#1

LABORATORY NUMBER

04702648

DATE RECEIVED

09-Jul-2004

DATE REPORTED

12-Jul-2004

Submitted By

Aspen Builders, Inc
6120 Village Drive, Ste. B
Lincoln, NE 68516

ANALYSIS OF		UNIT OF MEASURE	RESULT	LBS/ ACRE FOOT	
Total Hardness	---	---	8.4	---	[REDACTED]
	---	---	181.5	---	
	ppm	---	385.5	1048.2	
	ppm	---	2.0	5.4	
Total Alkalinity	mmhos/cm	---	0.68	---	[REDACTED]
	ppm	---	435	1184	
Total Dissolved Solids	meq/l	---	3.30	---	[REDACTED]
	ppm	---	20	53	
	ppm	---	0.10	0.30	
Calcium	ppm	---	76.0	207.0	[REDACTED]
	ppm	---	20	53	
Magnesium	meq/l	---	5.34	---	[REDACTED]
	mmhos/cm	---	0.68	---	
	ppm	---	435	1184	
					No anticipated difficulty with most crops.
					Some difficulty for sensitive & moderately sensitive crops
					Extremely difficult for most crops
ANALYSIS OF NUTRIENTS					
Nitrate-N	0.20				
	1.00				
	9.00				
	10.0				
	56.0				
	35.0				
	0.20				
	0.10				
	0.10				
	0.30				
Nitrite-N	0.60				
	2.03				
	29.20				
	45.0				
	152.3				
Ammonia-N	31.5				
	0.54				
	0.27				
Phosphate-P	0.30				
	0.30				

NO3- 0.01

pHc 7.23
TOTAL CATIONS 7.15
TOTAL ANIONS 7.69
SAR 2.46